

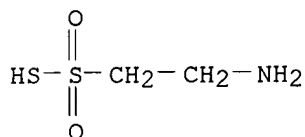
FILE 'REGISTRY' ENTERED AT 10:43:14 ON 08 NOV 2002

L1 2 S E3
 E METHIONINE/CN
L2 2 S E3
 E CYSTINE/CN
L3 2 S E3
 E CYSTEINE/CN
L4 6 S L1 OR L2 OR L3
 E HOMOCYSTEINE.CN
 E HOMOCYSTEINE/CN
L5 2 S E3
 E SULFINIC ACID/CN
 E CYSTEINIC ACID/CN
 E THIOCYSTEINE/CN
L6 1 S E3
 E TAURINE/CN
L7 1 S E3
 E THIOTAURINE/CN
 E DJENKOLIC ACID/CN
L8 1 S E3
 E CYSTATHIONINE/CN
L9 1 S E3
 E LANTHIONINE/CN
 E ENTHIONINE/CN
L10 6 S L5 OR L6 OR L7 OR L8 OR L9
 E TANNIN/CN
 E VITAMIN C/CN
L11 1 S E3

FILE 'USPATFULL, CAPLUS' ENTERED AT 10:48:57 ON 08 NOV 2002

L12 82986 S 70-18-8/RN OR GLUTATHIONE
L13 53869 S 3374-22-9/RN OR 923-32-0/RN OR 63-68-3/RN OR 59-51-8/RN OR 56
L14 205477 S CYSTEINE OR CYSTINE OR METHIONINE
L15 210389 S L13 OR L14
L16 272520 S L12 OR L15
L17 726 S 2637-54-4/RN OR 300-84-5/RN OR THIOTAURINE OR HYPOTAURINE OR
L18 14175 S 6027-13-0/RN OR 5652-32-4/RN OR 498-59-9/RN OR 454-29-5/RN OR
L19 27565 S HOMOCYSTEINE OR THIOCYSTEINE OR DJENKOLIC OR TAURINE OR CYSTA
L20 28903 S L18 OR L19
L21 29109 S L17 OR L20
L22 125917 S (VITAMIN (3A) C) OR (ASCORBIC (3A) ACID) OR (SODIUM (3A) ASCO
L23 29844 S TANNIN
L24 27280 S L16 AND (L21 OR L22 OR L23)
L25 237475 S (LACTIC OR GLYCOLIC OR MALIC OR CITRIC) (P) ACID
L26 121155 S (HYDROXYCARBOXYLIC OR BENZILIC OR TROPIC OR ISOCITRIC OR CITR
L27 6448 S GLUCONOLACTONE OR GALACTONOLACTONE OR RIBONOLACTONE OR PANTOL
L28 8869 S (PANTOTHENIC OR PANTOTHEINIC) (P) ACID
L29 305752 S L25 OR L26 OR L27 OR L28
L30 6450 S L24 AND L29

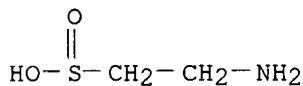
L3 ANSWER 1 OF 2 REGISTRY COPYRIGHT 2002 ACS
 RN 2937-54-4 REGISTRY
 CN Ethanesulphonothioic acid, 2-amino- (9CI) (CA INDEX NAME)
 OTHER CA INDEX NAMES:
 CN Taurine, thio- (6CI, 7CI, 8CI)
 OTHER NAMES:
 CN **Thiotaurine**
 FS 3D CONCORD
 MF C2 H7 N O2 S2
 CI COM
 LC STN Files: BEILSTEIN*, BIOSIS, CA, CAOLD, CAPLUS, CASREACT, CHEMLIST,
 EMBASE, MEDLINE, PROMT, TOXCENTER, USPATFULL
 (*File contains numerically searchable property data)
 Other Sources: EINECS**
 (**Enter CHEMLIST File for up-to-date regulatory information)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

42 REFERENCES IN FILE CA (1967 TO DATE)
 43 REFERENCES IN FILE CAPLUS (1967 TO DATE)
 28 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

L3 ANSWER 2 OF 2 REGISTRY COPYRIGHT 2002 ACS
 RN 300-84-5 REGISTRY
 CN Ethanesulfinic acid, 2-amino- (8CI, 9CI) (CA INDEX NAME)
 OTHER NAMES:
 CN 2-Aminoethylsulfinic acid
 CN Cystaminesulfinic acid
 CN **Hypotaurine**
 FS 3D CONCORD
 MF C2 H7 N O2 S
 CI COM
 LC STN Files: AGRICOLA, ANABSTR, BEILSTEIN*, BIOBUSINESS, BIOSIS,
 BIOTECHNO, CA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CBNB, CHEMCATS,
 CSChem, DDFU, DRUGU, EMBASE, MEDLINE, PROMT, TOXCENTER, USPATFULL, VETU
 (*File contains numerically searchable property data)

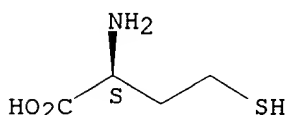


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

391 REFERENCES IN FILE CA (1967 TO DATE)
 2 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
 392 REFERENCES IN FILE CAPLUS (1967 TO DATE)
 12 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

L10 ANSWER 1 OF 6 REGISTRY COPYRIGHT 2002 ACS
 RN 6027-13-0 REGISTRY
 CN L-Homocysteine (9CI) (CA INDEX NAME)
 OTHER CA INDEX NAMES:
 CN Butyric acid, 2-amino-4-mercapto-, L- (8CI)
 OTHER NAMES:
 CN (S)-2-Amino-4-mercaptobutanoic acid
 CN (S)-Homocysteine
 CN 2-Amino-4-mercapto-L-butyric acid
 CN 2-Amino-4-mercaptobutyric acid
 CN Butanoic acid, 2-amino-4-mercapto-, (S)-
 CN **Homocysteine**
 FS STEREOSEARCH
 DR 454-28-4, 1867-00-1
 MF C4 H9 N O2 S
 CI COM
 LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, BEILSTEIN*, BIOBUSINESS, BIOSIS,
 BIOTECHNO, CA, CABA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CBNB, CEN,
 CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCHEM, DDFU, DRUGU, EMBASE,
 GMELIN*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*, PIRA, PROMT,
 RTECS*, TOXCENTER, USPAT2, USPATFULL
 (*File contains numerically searchable property data)
 Other Sources: EINECS**
 (**Enter CHEMLIST File for up-to-date regulatory information)

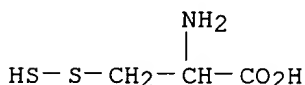
Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

3200 REFERENCES IN FILE CA (1962 TO DATE)
 67 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
 3205 REFERENCES IN FILE CAPLUS (1962 TO DATE)

L10 ANSWER 2 OF 6 REGISTRY COPYRIGHT 2002 ACS
 RN 5652-32-4 REGISTRY
 CN Alanine, 3-(thiosulfeno)- (7CI, 8CI, 9CI) (CA INDEX NAME)
 OTHER NAMES:
 CN **Thiocysteine**
 FS 3D CONCORD
 MF C3 H7 N O2 S2
 LC STN Files: AGRICOLA, BIOSIS, CA, CANCERLIT, CAOLD, CAPLUS, MEDLINE,
 TOXCENTER

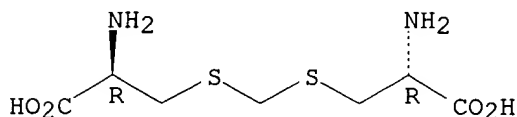


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

12 REFERENCES IN FILE CA (1962 TO DATE)
 12 REFERENCES IN FILE CAPLUS (1962 TO DATE)
 2 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

L10 ANSWER 3 OF 6 REGISTRY COPYRIGHT 2002 ACS
 RN 498-59-9 REGISTRY
 CN L-Cysteine, S,S'-methylenebis- (9CI) (CA INDEX NAME)
 OTHER CA INDEX NAMES:
 CN Alanine, 3,3'-(methylenedithio)di- (7CI)
 CN Alanine, 3,3'-(methylenedithio)di-, L- (8CI)
 CN **Djenkolic acid (6CI)**
 OTHER NAMES:
 CN .beta.,.beta.'-Methylenedithiodialanine
 CN 3,3'-Methylenedithiobis(2-aminopropanoic acid)
 CN L-Djenkolic acid
 FS STEREOSEARCH
 DR 13117-51-6, 25717-42-4, 50584-55-9
 MF C7 H14 N2 O4 S2
 CI COM
 LC STN Files: AGRICOLA, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CAOLD, CAPLUS, CHEMCATS, CHEMLIST, CSCHEM, DDFU, DRUGU, EMBASE, HODOC*, MEDLINE, MRCK*, NAPRALERT, TOXCENTER, USPATFULL
 (*File contains numerically searchable property data)
 Other Sources: EINECS**
 (**Enter CHEMLIST File for up-to-date regulatory information)

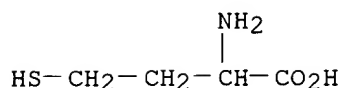
Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

108 REFERENCES IN FILE CA (1962 TO DATE)
 6 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
 108 REFERENCES IN FILE CAPLUS (1962 TO DATE)
 29 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

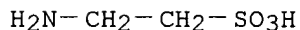
L10 ANSWER 4 OF 6 REGISTRY COPYRIGHT 2002 ACS
 RN 454-29-5 REGISTRY
 CN **Homocysteine (9CI)** (CA INDEX NAME)
 OTHER CA INDEX NAMES:
 CN Butyric acid, 2-amino-4-mercapto-, DL- (8CI)
 CN DL-Homocysteine
 OTHER NAMES:
 CN (.+-.)-Homocysteine
 FS 3D CONCORD
 DR 115154-46-6
 MF C4 H9 N O2 S
 CI COM
 LC STN Files: ADISNEWS, AGRICOLA, BEILSTEIN*, BIOBUSINESS, BIOSIS, CA, CAOLD, CAPLUS, CASREACT, CEN, CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCHEM, GMELIN*, HODOC*, IFICDB, IFIPAT, IFIUDB, MEDLINE, PIRA, PROMT, RTECS*, TOXCENTER, USPAT2, USPATFULL
 (*File contains numerically searchable property data)
 Other Sources: EINECS**
 (**Enter CHEMLIST File for up-to-date regulatory information)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

350 REFERENCES IN FILE CA (1962 TO DATE)
 11 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
 350 REFERENCES IN FILE CAPLUS (1962 TO DATE)
 4 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

L10 ANSWER 5 OF 6 REGISTRY COPYRIGHT 2002 ACS
 RN 107-35-7 REGISTRY
 CN Ethanesulfonic acid, 2-amino- (9CI) (CA INDEX NAME)
 OTHER CA INDEX NAMES:
 CN **Taurine (8CI)**
 OTHER NAMES:
 CN .beta.-Aminoethylsulfonic acid
 CN 1-Aminoethane-2-sulfonic acid
 CN 2-Aminoethanesulfonic acid
 CN 2-Aminoethylsulfonic acid
 CN 2-Sulfoethylamine
 CN O-Due
 CN Taufon
 CN Taukard
 CN Tauphon
 FS 3D CONCORD
 DR 91105-79-2
 MF C2 H7 N O3 S
 CI COM
 LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, AQUIRE, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CABA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CBNB, CEN, CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCHEM, CSNB, DDFU, DETHERM*, DRUGU, EMBASE, GMELIN*, HODOC*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*, MSDS-OHS, NAPRALERT, NIOSHTIC, PHARMASEARCH, PIRA, PROMT, RTECS*, SPECINFO, SYNTHLINE, TOXCENTER, TULSA, USAN, USPAT2, USPATFULL, VETU
 (*File contains numerically searchable property data)
 Other Sources: DSL**, EINECS**, TSCA**, WHO
 (**Enter CHEMLIST File for up-to-date regulatory information)

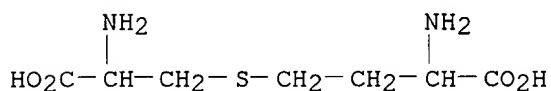


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

9917 REFERENCES IN FILE CA (1962 TO DATE)
 530 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
 9924 REFERENCES IN FILE CAPLUS (1962 TO DATE)
 5 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

L10 ANSWER 6 OF 6 REGISTRY COPYRIGHT 2002 ACS
 RN 56-88-2 REGISTRY
 CN L-Homocysteine, S-[(2R)-2-amino-2-carboxyethyl]- (9CI) (CA INDEX NAME)
 OTHER CA INDEX NAMES:
 CN **Cystathionine (6CI, 7CI)**

CN Cystathionine, L- (8CI)
 CN L-Homocysteine, S-(2-amino-2-carboxyethyl)-, (R)-
 OTHER NAMES:
 CN Butanoic acid, 2-amino-4-[(2-amino-2-carboxyethyl)thio]-, [R-(R*,S*)]-
 CN L-(+)-Cystathionine
 CN L-Cystathionine
 AR 6899-07-6
 DR 535-35-3
 MF C7 H14 N2 O4 S
 CI COM
 LC STN Files: AGRICOLA, ANABSTR, BEILSTEIN*, BIOBUSINESS, BIOSIS,
 BIOTECHNO, CA, CABA, CANCERLIT, CAOLD, CAPLUS, CHEMCATS, CHEMLIST,
 CSCHEM, DDFU, DRUGU, EMBASE, IFICDB, IFIPAT, IFIUDB, MEDLINE, MRCK*,
 NAPRALERT, TOXCENTER, USPATFULL
 (*File contains numerically searchable property data)
 Other Sources: EINECS**
 (**Enter CHEMLIST File for up-to-date regulatory information)

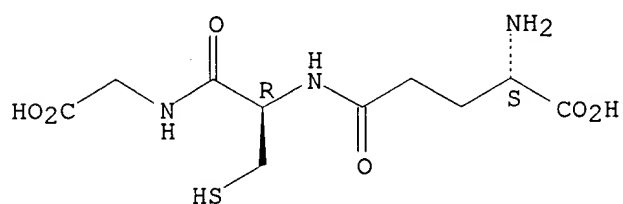


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

791 REFERENCES IN FILE CA (1962 TO DATE)
 6 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
 791 REFERENCES IN FILE CAPLUS (1962 TO DATE)
 26 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

L1 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2002 ACS
 RN 70-18-8 REGISTRY
 CN Glycine, L-.gamma.-glutamyl-L-cysteinyl- (9CI) (CA INDEX NAME)
 OTHER CA INDEX NAMES:
 CN **Glutathione (8CI)**
 CN Glycine, N-(N-L-.gamma.-glutamyl-L-cysteinyl)-
 OTHER NAMES:
 CN .gamma.-Glutamylcysteinylglycine
 CN .gamma.-L-Glutamyl-L-cysteinylglycine
 CN Agifutol S
 CN Copren
 CN Deltathione
 CN Glutathion
 CN Glutathione-SH
 CN Glutide
 CN Glutinal
 CN GSH
 CN Isethion
 CN L-Glutathione
 CN Neuthion
 CN Reduced glutathione
 CN Tathion
 CN Tathione
 CN Triptide
 FS STEREOSEARCH
 MF C10 H17 N3 O6 S
 CI COM
 LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, BEILSTEIN*, BIOBUSINESS, BIOSIS,
 BIOTECHNO, CA, CABA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CBNB, CEN,
 CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCHEM, CSNB, DDFU, DRUGU,
 EMBASE, GMELIN*, HODOC*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*,
 MSDS-OHS, NAPRALERT, NIOSHTIC, PIRA, PROMT, RTECS*, SPECINFO, SYNTHLINE,
 TOXCENTER, ULIDAT, USAN, USPAT2, USPATFULL, VETU, VTB
 (*File contains numerically searchable property data)
 Other Sources: DSL**, EINECS**, TSCA**
 (**Enter CHEMLIST File for up-to-date regulatory information)

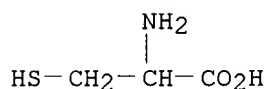
Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

27610 REFERENCES IN FILE CA (1967 TO DATE)
 1291 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
 27676 REFERENCES IN FILE CAPLUS (1967 TO DATE)
 7 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

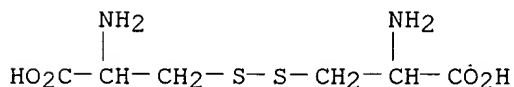
L4 ANSWER 1 OF 6 REGISTRY COPYRIGHT 2002 ACS
 RN 3374-22-9 REGISTRY
 CN **Cysteine (9CI)** (CA INDEX NAME)
 OTHER CA INDEX NAMES:
 CN Cysteine, DL- (8CI)
 CN DL-Cysteine
 OTHER NAMES:
 CN (.+-.)-Cysteine
 FS 3D CONCORD
 MF C3 H7 N O2 S
 CI COM
 LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, BEILSTEIN*, BIOBUSINESS, BIOSIS,
 CA, CAPLUS, CASREACT, CEN, CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN,
 CSCHM, DIOGENES, GMELIN*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE,
 MSDS-OHS, NAPRALERT, NIOSHTIC, PIRA, PROMT, RTECS*, SPECINFO, TOXCENTER,
 USPATFULL
 (*File contains numerically searchable property data)
 Other Sources: EINECS**
 (**Enter CHEMLIST File for up-to-date regulatory information)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

340 REFERENCES IN FILE CA (1962 TO DATE)
 11 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
 340 REFERENCES IN FILE CAPLUS (1962 TO DATE)

L4 ANSWER 2 OF 6 REGISTRY COPYRIGHT 2002 ACS
 RN 923-32-0 REGISTRY
 CN **Cystine (9CI)** (CA INDEX NAME)
 OTHER CA INDEX NAMES:
 CN Cystine, DL- (8CI)
 OTHER NAMES:
 CN DL-Cystine
 FS 3D CONCORD
 MF C6 H12 N2 O4 S2
 CI COM
 LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, BEILSTEIN*, BIOBUSINESS, BIOSIS,
 CA, CAPLUS, CASREACT, CEN, CHEMCATS, CHEMLIST, CIN, CSCHM, DIOGENES,
 GMELIN*, HODOC*, IFICDB, IFIPAT, IFIUDB, MEDLINE, MRCK*, MSDS-OHS,
 NAPRALERT, PROMT, TOXCENTER, TULSA, USPATFULL
 (*File contains numerically searchable property data)
 Other Sources: EINECS**
 (**Enter CHEMLIST File for up-to-date regulatory information)



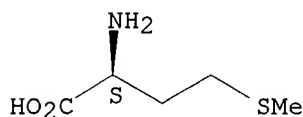
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

159 REFERENCES IN FILE CA (1962 TO DATE)
 5 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

159 REFERENCES IN FILE CAPLUS (1962 TO DATE)

L4 ANSWER 3 OF 6 REGISTRY COPYRIGHT 2002 ACS
 RN 63-68-3 REGISTRY
 CN L-Methionine (9CI) (CA INDEX NAME)
 OTHER CA INDEX NAMES:
 CN Methionine, L- (8CI)
 OTHER NAMES:
 CN (S)-2-Amino-4-(methylthio)butanoic acid
 CN .alpha.-Amino-.gamma.-methylmercaptobutyric acid
 CN .gamma.-Methylthio-.alpha.-aminobutyric acid
 CN 2-Amino-4-(methylthio)butyric acid
 CN Butanoic acid, 2-amino-4-(methylthio)-, (S)-
 CN Cymethion
 CN h-Met-oh
 CN L-(-)-Methionine
 CN L-.alpha.-Amino-.gamma.-methylthiobutyric acid
 CN L-Homocysteine, S-methyl-
 CN l-Methionine
 CN **Methionine**
 CN S-Methionine
 CN Toxin WAR (Bacillus thuringiensis strain PS205C)
 FS STEREOSEARCH
 DR 7005-18-7, 24425-78-3
 MF C5 H11 N O2 S
 CI COM
 LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, AQUIRE, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CABA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CBNB, CEN, CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCHEM, CSNB, DDFU, DETHERM*, DIOGENES, DRUGU, EMBASE, GMELIN*, HODOC*, HSDB*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*, MSDS-OHS, NAPRALERT, NIOSHTIC, PIRA, PROMT, RTECS*, SPECINFO, TOXCENTER, TULSA, USAN, USPAT2, USPATFULL, VETU, VTB
 (*File contains numerically searchable property data)
 Other Sources: DSL**, EINECS**, TSCA**
 (**Enter CHEMLIST File for up-to-date regulatory information)

Absolute stereochemistry.

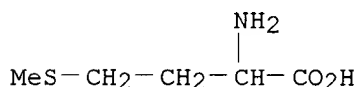


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

26528 REFERENCES IN FILE CA (1962 TO DATE)
 681 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
 26547 REFERENCES IN FILE CAPLUS (1962 TO DATE)
 10 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

L4 ANSWER 4 OF 6 REGISTRY COPYRIGHT 2002 ACS
 RN 59-51-8 REGISTRY
 CN **Methionine (9CI)** (CA INDEX NAME)
 OTHER CA INDEX NAMES:
 CN DL-Methionine
 CN Methionine, DL- (8CI)
 OTHER NAMES:
 CN (.+-.)-Methionine
 CN .alpha.-Amino-.gamma.-methylmercaptobutyric acid

CN Acimetion
 CN Banthionine
 CN Cynaron
 CN DL-2-Amino-4-(methylthio)butyric acid
 CN Dyprin
 CN Lactet
 CN Lobamine
 CN Meonine
 CN Methilalanin
 CN Metione
 CN Neston
 CN Racemethionine
 FS 3D CONCORD
 MF C5 H11 N O2 S
 CI COM
 LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, BEILSTEIN*, BIOBUSINESS, BIOSIS,
 BIOTECHNO, CA, CAOLD, CAPLUS, CASREACT, CBNB, CEN, CHEMCATS,
 CHEMINFORMRX, CHEMLIST, CIN, CSCHM, CSNB, DETHERM*, DIOGENES, EMBASE,
 GMELIN*, HODOC*, HSDB*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*,
 MSDS-OHS, NAPRALERT, NIOSHTIC, PIRA, PROMT, RTECS*, TOXCENTER, TULSA,
 ULIDAT, USAN, USPATFULL
 (*File contains numerically searchable property data)
 Other Sources: DSL**, EINECS**, TSCA**, WHO
 (**Enter CHEMLIST File for up-to-date regulatory information)



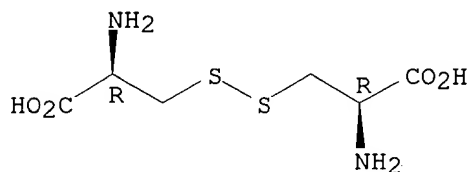
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

2707 REFERENCES IN FILE CA (1962 TO DATE)
 62 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
 2707 REFERENCES IN FILE CAPLUS (1962 TO DATE)
 3 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

L4 ANSWER 5 OF 6 REGISTRY COPYRIGHT 2002 ACS
 RN 56-89-3 REGISTRY
 CN L-Cystine (9CI) (CA INDEX NAME)
 OTHER CA INDEX NAMES:
 CN Cystine, L- (8CI)
 OTHER NAMES:
 CN (-)-Cystine
 CN .beta.,.beta.'-Diamino-.beta.,.beta.'-dicarboxydiethyl disulfide
 CN .beta.,.beta.'-Dithiodialanine
 CN 3,3'-Dithiobis(2-aminopropanoic acid)
 CN Bis(.beta.-amino-.beta.-carboxyethyl) disulfide
 CN **Cystine**
 CN Cystine acid
 CN Dicysteine
 CN L-(-)-Cystine
 CN L-Alanine, 3,3'-dithiobis-
 CN L-Cysteine disulfide
 CN L-Cystin
 CN l-Cystine
 CN Oxidized L-cysteine
 CN Propanoic acid, 3,3'-dithiobis[2-amino-, [R-(R*,R*)]-
 CN [R-(R*,R*)]-3,3'-Dithiobis[2-aminopropanoic acid]
 AR 24645-67-8

FS STEREOSEARCH
 DR 24645-67-8
 MF C6 H12 N2 O4 S2
 CI COM
 LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, AQUIRE, BEILSTEIN*, BIOBUSINESS,
 BIOSIS, BIOTECHNO, CA, CABA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CBNB,
 CEN, CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCHEM, CSNB, DDFU,
 DETHERM*, DIOGENES, DRUGU, EMBASE, GMELIN*, HODOC*, IFICDB, IFIPAT,
 IFIUDB, IPA, MEDLINE, MRCK*, MSDS-OHS, NAPRALERT, NIOSHTIC, PIRA, PROMT,
 RTECS*, SPECINFO, SYNTHLINE, TOXCENTER, TULSA, ULIDAT, USAN, USPAT2,
 USPATFULL, VETU
 (*File contains numerically searchable property data)
 Other Sources: DSL**, EINECS**, TSCA**
 (**Enter CHEMLIST File for up-to-date regulatory information)

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

8003 REFERENCES IN FILE CA (1962 TO DATE)
 207 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
 8005 REFERENCES IN FILE CAPLUS (1962 TO DATE)
 6 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

L4 ANSWER 6 OF 6 REGISTRY COPYRIGHT 2002 ACS
 RN 52-90-4 REGISTRY
 CN L-Cysteine (9CI) (CA INDEX NAME)
 OTHER CA INDEX NAMES:
 CN Cysteine, L- (8CI)
 OTHER NAMES:
 CN (R)-2-Amino-3-mercaptopropanoic acid
 CN (R)-Cysteine
 CN .beta.-Mercaptoalanine
 CN 2-Amino-3-mercaptopropionic acid
 CN 318: PN: WO0214478 SEQID: 317 claimed sequence
 CN 7: PN: WO02059293 FIGURE: 9 claimed sequence
 CN Cystein
 CN **Cysteine**
 CN Half-cystine
 CN L-(+)-Cysteine
 CN L-Alanine, 3-mercapto-
 CN L-Cys
 CN NSC 8746
 CN Propanoic acid, 2-amino-3-mercapto-, (R)-
 CN Thioserine
 FS STEREOSEARCH
 DR 4371-52-2
 MF C3 H7 N O2 S
 CI COM
 LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, AQUIRE, BEILSTEIN*, BIOBUSINESS,
 BIOSIS, BIOTECHNO, CA, CABA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CBNB,
 CEN, CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCHEM, CSNB, DDFU,
 DETHERM*, DIOGENES, DRUGU, EMBASE, GMELIN*, HODOC*, HSDB*, IFICDB,

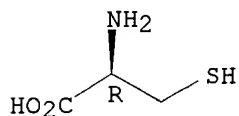
IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*, MSDS-OHS, NAPRALERT, NIOSHTIC,
PIRA, PROMT, RTECS*, SPECINFO, SYNTHLINE, TOXCENTER, ULIDAT, USAN,
USPAT2, USPATFULL, VETU

(*File contains numerically searchable property data)

Other Sources: DSL**, EINECS**, TSCA**, WHO

(**Enter CHEMLIST File for up-to-date regulatory information)

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

27158 REFERENCES IN FILE CA (1962 TO DATE)

1313 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

27197 REFERENCES IN FILE CAPLUS (1962 TO DATE)

9 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

L14 ANSWER 1 OF 7 USPATFULL

ACCESSION NUMBER: 96:111140 USPATFULL
TITLE: External preparation for skin
INVENTOR(S): Fukuda, Minoru, Yokohama, Japan
Naganuma, Masako, Yokohama, Japan
Yamase, Yuki, Yokohama, Japan
Yokokawa, Yoshihiro, Yokohama, Japan
Komasaki, Hisayuki, Yokohama, Japan
PATENT ASSIGNEE(S): Shiseido Co., Ltd., Tokyo, Japan (non-U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5580549		19961203 <--
APPLICATION INFO.:	US 1995-406244		19950316 (8)
RELATED APPLN. INFO.:	Continuation of Ser. No. US 1993-60998, filed on 14 May 1993, now abandoned		

	NUMBER	DATE
PRIORITY INFORMATION:	JP 1992-155910	19920522
	JP 1992-148688	19920515
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	Granted	
PRIMARY EXAMINER:	Venkat, Jyothsna	
LEGAL REPRESENTATIVE:	Townsend & Banta	
NUMBER OF CLAIMS:	10	
EXEMPLARY CLAIM:	1	
LINE COUNT:	1194	

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB An external preparing for skin comprising one or more than two types of 2-hydroxy benzoic acid derivative and/or salt thereof represented by the following formula: ##STR1## wherein R is an alkoxy group or alkyl group in the formula. The external preparation for the skin according to the present invention has a suppression effect on melanine generation by inhibition of tyrosinase activity. Accordingly, an excellent bleaching effect based upon the suppression of chromatosis and a high degree of safety can be obtained.

=> d kwic 1

L14 ANSWER 1 OF 7 USPATFULL

PI US 5580549 19961203 <--

SUMM . . . cure of such dyschromatosis as the symptomatic therapy, e.g. an oral administration of a large amount of vitamin C, injecting **glutathione**, and regional application of ointment, cream or lotion including kojic acid, vitamin C and the derivative thereof or **cysteine**. However, an adequate bleaching effect has not been obtained by these treatments.

SUMM higher fatty acid amide sulfate such as sodium N-myristoyl-N-methyl **taurine**, sodium coconuts oil fatty acid methyl tauride, sodium lauryl methyl tauride;

SUMM As for an example of amino acid, glycine, leucine, phenylalanine, tyrosin, aspartic acid, glutamic acid, arginine, histidine, lysine, cysine, **cysteine**, acyl sarcosine sodium (lauroyl sarcosine sodium), acyl glutamate, **glutathione**, pyrrolidone carboxylate are cited.

SUMM medicinal ingredients such as caffeine, **tannin**, tranexamic acid and derivatives thereof, licorice extractive (glabridin), pyracantha fortuneana, various herbal medicine, tocopherol acetate, glycyrrhizic acid and derivatives or. . .

SUMM other bleaching ingredients such as Vitamin C, manganese

ascorbate phosphate, glucoside **ascorbate**, arbutin, kojic acid;

DETD . . . It is obvious that these examples had excellent bleaching effect compared with the comparative example a to d. Although the **ascorbic acid** according to the example c had high inhibition effect to the activity of tyrosinase, it is difficult to be absorbed. . .

DETD TABLE 1

Exm. No.	Sample	ID50 (mM) /bleaching effect/stability
1	2-hydroxy-3-methoxybenzoic acid	21.0 .circleincircle. .smallcircle.
2	2-hydroxy-4-methoxybenzoic acid	1.0 .circleincircle. .smallcircle.
3	2-hydroxy-5-methoxybenzoic acid	4.5 .circleincircle. .smallcircle.
4	2-hydroxy-4-ethoxybenzoic acid	2.0 .circleincircle. .smallcircle.
a	hydroquinone	4.2 .DELTA. x
b	gentisic acid	13.6 .DELTA. .DELTA.
c	ascorbic acid	0.3 .smallcircle. .smallcircle.
d	none	-- x --

DETD

Stearyl alcohol	5.0
Stearic acid	2.5
Hydrogenated lanolin	2.5
Squalane	5.0
2-Octyl dodecylalcohol	6.0
Polyoxyethylene (25) cetyl ether	3.0
Glycerin monostearate ester	2.0
Propylene glycol	7.0
Sodium L- ascorbate	0.5
2-hydroxy-3-methoxy benzoate	0.8
Sodium bisulfite	0.03
Ethyl p-hydroxybenzoate	0.3
Perfume	q.s.
Ion exchanged water	balance

L11 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2002 ACS

RN 50-81-7 REGISTRY

CN L-Ascorbic acid (8CI, 9CI) (CA INDEX NAME)

OTHER NAMES:

CN (+)-Ascorbic acid

CN 3-keto-L-Gulofuranolactone

CN 3-Oxo-L-gulofuranolactone

CN Adenex

CN Allercorb

CN Antiscorbic vitamin

CN Antiscorbutic vitamin

CN Ascoltin

CN Ascorbajen

CN Ascorbic acid

CN Ascorbutina

CN Ascorin

CN Ascorteal

CN Ascorvit

CN C-Quin

CN C-Vimin

CN Cantan

CN Cantaxin

CN Catavin C

CN Ce-Mi-Lin

CN Ce-Vi-Sol

CN Cebicure

CN Cebion

CN Cebione

CN Cecon

CN Cegiolan

CN Ceglion

CN Ceklin

CN Celaskon

CN Celin

CN Cemagyl

CN Cenetone

CN Cereon

CN Cergona

CN Cescorbat

CN Cetamid

CN Cetemican

CN Cevalin

CN Cevatine

CN Cevex

CN Cevimin

CN Cevital

CN Cevitamic acid

CN Cevitamin

CN Cevitan

CN Cevitex

CN Cewin

CN Chewcee

CN Ciamin

CN Cipca

CN **Vitamin C**

ADDITIONAL NAMES NOT AVAILABLE IN THIS FORMAT - Use FCN, FIDE, or ALL for
DISPLAY

FS STEREOSEARCH

DR 56533-05-2, 57304-74-2, 57606-40-3, 56172-55-5, 129940-97-2, 14536-17-5,
50976-75-5, 154170-90-8, 89924-69-6, 30208-61-8, 259133-78-3

MF C6 H8 O6

CI COM

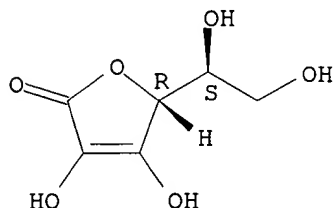
LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, AQUIRE, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CABA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CBNB, CEN, CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCHEM, CSNB, DDFU, DETHERM*, DIOGENES, DIPPR*, DRUGU, EMBASE, ENCOMPLIT, ENCOMPLIT2, ENCOMPPAT, ENCOMPPAT2, GMELIN*, HODOC*, HSDB*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*, MSDS-OHS, NAPRALERT, NIOSHTIC, PDLCOM*, PHAR, PHARMASEARCH, PIRA, PROMT, RTECS*, SPECINFO, SYNTHLINE, TOXCENTER, TULSA, ULIDAT, USAN, USPAT2, USPATFULL, VETU, VTB

(*File contains numerically searchable property data)

Other Sources: DSL**, EINECS**, TSCA**, WHO

(**Enter CHEMLIST File for up-to-date regulatory information)

Absolute stereochemistry.



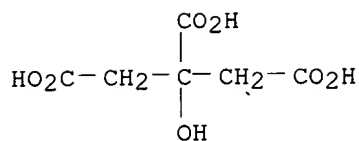
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

46039 REFERENCES IN FILE CA (1962 TO DATE)

1187 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

46094 REFERENCES IN FILE CAPLUS (1962 TO DATE)

12 REFERENCES IN FILE CAOLD (PRIOR TO 1967)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

36633 REFERENCES IN FILE CA (1967 TO DATE)
 2422 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
 36676 REFERENCES IN FILE CAPLUS (1967 TO DATE)
 9 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

L8 ANSWER 4 OF 4 REGISTRY COPYRIGHT 2002 ACS

RN 50-21-5 REGISTRY

CN Propanoic acid, 2-hydroxy- (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN **Lactic acid (7CI, 8CI)**

OTHER NAMES:

CN (.+-.)-Lactic acid

CN .alpha.-Hydroxypropanoic acid

CN .alpha.-Hydroxypropionic acid

CN 2-Hydroxypropanoic acid

CN 2-Hydroxypropionic acid

CN Biolac

CN Chem-Cast

CN DL-Lactic acid

CN dl-Lactic acid

CN Milk acid

CN Tonsilloosan

FS 3D CONCORD

DR 152-36-3, 598-82-3

MF C3 H6 O3

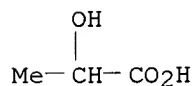
CI COM

LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CABA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CBNB, CEN, CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCHEM, CSNB, DDFU, DETHERM*, DIOGENES, DIPPR*, DRUGU, EMBASE, ENCOMPLIT, ENCOMPLIT2, ENCOMPPAT, ENCOMPPAT2, GMELIN*, HSDB*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*, MSDS-OHS, NAPRALERT, NIOSHTIC, PDLCOM*, PIRA, PROMT, RTECS*, SPECINFO, SYNTHLINE, TOXCENTER, TULSA, USAN, USPAT2, USPATFULL, VETU, VTB

(*File contains numerically searchable property data)

Other Sources: DSL**, EINECS**, TSCA**

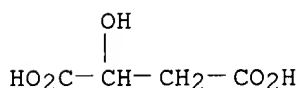
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PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

35574 REFERENCES IN FILE CA (1967 TO DATE)
 1249 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
 35613 REFERENCES IN FILE CAPLUS (1967 TO DATE)
 1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

L8 ANSWER 1 OF 4 REGISTRY COPYRIGHT 2002 ACS
 RN 6915-15-7 REGISTRY
 CN Butanedioic acid, hydroxy- (9CI) (CA INDEX NAME)
 OTHER CA INDEX NAMES:
 CN **Malic acid (8CI)**
 OTHER NAMES:
 CN (.+-.)-Malic acid
 CN .alpha.-Hydroxysuccinic acid
 CN 2-Hydroxybutanedioic acid
 CN 2-Hydroxyethane-1,2-dicarboxylic acid
 CN 2-Hydroxysuccinic acid
 CN Deoxytetraric acid
 CN DL-Malic acid
 CN dl-Malic acid
 CN FDA 2018
 CN Hydroxybutanedioic acid
 CN Hydroxysuccinic acid
 CN Musashi-no-Ringosan
 CN Pomalus Acid
 CN R,S(.+-.)-Malic acid
 FS 3D CONCORD
 DR 617-48-1, 41308-42-3
 MF C4 H6 O5
 CI COM
 LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CABA, CANCERLIT, CAPLUS, CASREACT, CBNB, CEN, CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCHEM, DDFU, DETHERM*, DIOGENES, DIPPR*, DRUGU, EMBASE, GMELIN*, HODOC*, HSDB*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*, MSDS-OHS, NAPRALERT, NIOSHTIC, PDLCOM*, PIRA, PROMT, RTECS*, SPECINFO, SYNTHLINE, TOXCENTER, TULSA, USAN, USPAT2, USPATFULL, VETU, VTB
 (*File contains numerically searchable property data)
 Other Sources: DSL**, EINECS**, TSCA**
 (**Enter CHEMLIST File for up-to-date regulatory information)

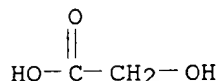


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

13277 REFERENCES IN FILE CA (1967 TO DATE)
 622 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
 13295 REFERENCES IN FILE CAPLUS (1967 TO DATE)

L8 ANSWER 2 OF 4 REGISTRY COPYRIGHT 2002 ACS
 RN 79-14-1 REGISTRY
 CN Acetic acid, hydroxy- (9CI) (CA INDEX NAME)
 OTHER CA INDEX NAMES:
 CN **Glycolic acid (7CI, 8CI)**
 OTHER NAMES:
 CN .alpha.-Hydroxyacetic acid
 CN 2-Hydroxyacetic acid
 CN Glycocide
 CN GlyPure
 CN Hydroxyacetic acid
 CN Hydroxyethanoic acid
 FS 3D CONCORD
 DR 259744-22-4

MF C2 H4 O3
 CI COM
 LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CANCERLIT, CAPLUS, CASREACT, CBNB, CEN, CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCHEM, CSNB, DDFU, DETHERM*, DIPPR*, DRUGU, EMBASE, ENCOMPLIT, ENCOMPLIT2, ENCOMPPAT, ENCOMPPAT2, GMELIN*, HODOC*, HSDB*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*, MSDS-OHS, NAPRALERT, NIOSHTIC, PDLCOM*, PIRA, PROMT, RTECS*, SPECINFO, SYNTHLINE, TOXCENTER, TULSA, ULIDAT, USPAT2, USPATFULL, VETU, VTB
 (*File contains numerically searchable property data)
 Other Sources: DSL**, EINECS**, TSCA**
 (**Enter CHEMLIST File for up-to-date regulatory information)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

6085 REFERENCES IN FILE CA (1967 TO DATE)
 582 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
 6095 REFERENCES IN FILE CAPLUS (1967 TO DATE)

L8 ANSWER 3 OF 4 REGISTRY COPYRIGHT 2002 ACS
 RN 77-92-9 REGISTRY
 CN 1,2,3-Propanetricarboxylic acid, 2-hydroxy- (9CI) (CA INDEX NAME)
 OTHER CA INDEX NAMES:
 CN Citric acid (8CI)
 OTHER NAMES:
 CN 2-Hydroxy-1,2,3-propanetricarboxylic acid
 CN 3-Carboxy-3-hydroxypentane-1,5-dioic acid
 CN Aciletten
 CN Chemfill
 CN Citretten
 CN Citro
 CN F 0001 (polycarboxylic acid)
 CN Hydrocerol A
 CN Uro-trainer
 FS 3D CONCORD
 DR 12262-73-6, 43136-35-2, 245654-34-6
 MF C6 H8 O7
 CI COM
 LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CABA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CBNB, CEN, CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCHEM, CSNB, DDFU, DETHERM*, DIOGENES, DIPPR*, DRUGU, EMBASE, ENCOMPLIT, ENCOMPLIT2, ENCOMPPAT, ENCOMPPAT2, GMELIN*, HODOC*, HSDB*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*, MSDS-OHS, NAPRALERT, NIOSHTIC, PDLCOM*, PHARMASEARCH, PIRA, PROMT, RTECS*, SPECINFO, SYNTHLINE, TOXCENTER, TULSA, USAN, USPAT2, USPATFULL, VETU, VTB
 (*File contains numerically searchable property data)
 Other Sources: DSL**, EINECS**, TSCA**
 (**Enter CHEMLIST File for up-to-date regulatory information)